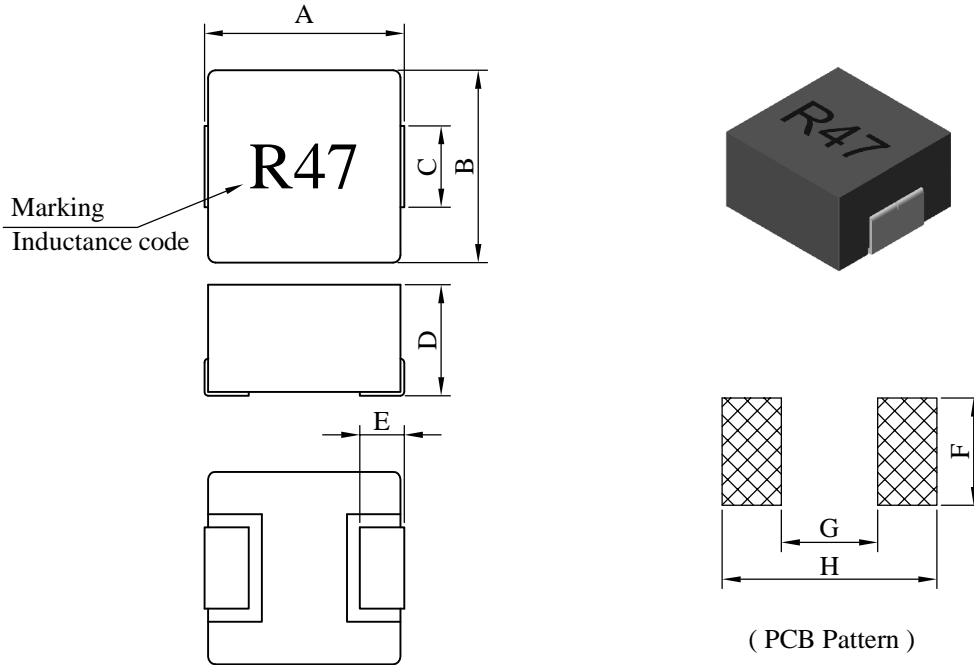


SPECIFICATION FOR APPROVAL

REF. :

| | | | | | |
|------------|-----------------------------|---------------|------------------|------|---|
| PROD. NAME | Shielded SMD Power Inductor | ABC'S DWG NO. | HE0530□□□□S□-□□□ | | |
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I . Configuration and dimensions :



Unit : mm

| A | B | C | D | E | F | G | H |
|------------|------------|------------|-----------|------------|-----------|-----------|-----------|
| 5.40 ±0.30 | 5.20 ±0.30 | 2.20 ±0.30 | 3.00 max. | 1.20 ±0.20 | 2.90 ref. | 2.60 ref. | 5.80 ref. |

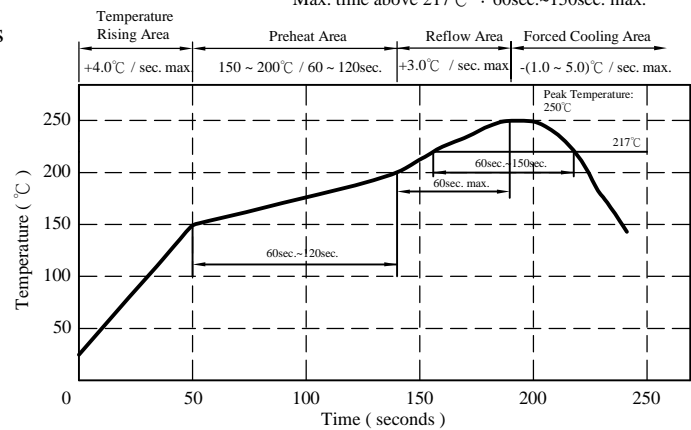
II . Description :

- a . Powder molding construction.
- b . Magnetically shielded.
- c . Enamelled copper wire : N class
- d . Product weight : 0.45g (ref.)
- e . Moisture sensitivity Level 2a
- f . Products comply with RoHS' requirements
- g . Halogen free

III . General specification :

- a . Storage temp. : -55°C ~ +125°C
- b . Operating temp. : -55°C ~ +125°C
(Temp. rise included)
- c . Resistance to solder heat : 260°C . 10 sec.

Peak temp. : 250°C max.
Max. peak temp. - 5°C : 30sec. max.
Max. time above 217°C : 60sec.~150sec. max.



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SPECIFICATION FOR APPROVAL

REF. :

| | | | | | |
|---------------|-----------------------------|---------------|------------------|------|---|
| PROD. NAME | Shielded SMD Power Inductor | ABC'S DWG NO. | HE0530□□□□S□-□□□ | | |
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IV . Electrical characteristics :

| DWG. No. | Inductance (uH) | RDC (mΩ) | | Isat (A) typ. | Irms (A) typ. |
|------------------|----------------------|---------------|------|-----------------------|-----------------------|
| | | typ. | max. | | |
| HE0530R47MS□-□□□ | 0.47 ±20% | 7.4 | 8.5 | 15.0 | 13.5 |
| HE0530R68MS□-□□□ | 0.68 ±20% | 11.0 | 12.0 | 14.0 | 8.5 |
| HE05301R0MS□-□□□ | 1.00 ±20% | 13.0 | 14.0 | 11.0 | 7.0 |
| HE05301R5MS□-□□□ | 1.50 ±20% | 20.0 | 25.0 | 8.5 | 6.0 |
| HE05302R2MS□-□□□ | 2.20 ±20% | 25.0 | 29.0 | 7.5 | 5.5 |
| HE05303R3MS□-□□□ | 3.30 ±20% | 32.0 | 38.0 | 6.0 | 5.0 |
| HE05304R7MS□-□□□ | 4.70 ±20% | 50.0 | 60.0 | 5.0 | 3.5 |
| HE05306R8MS□-□□□ | 6.80 ±20% | 75.0 | 90.0 | 4.0 | 3.0 |

- 1). Electrical specifications at 25°C
- 2). Inductance Test Condition. :500kHz / 0.25V
- 3). Isat base on $\Delta L / L0A=30\%$ typ.(Approximately transient current)
- 4). Irms base on Temp. rise 40°C typ.
- 5). Rated Voltage : 50V max.

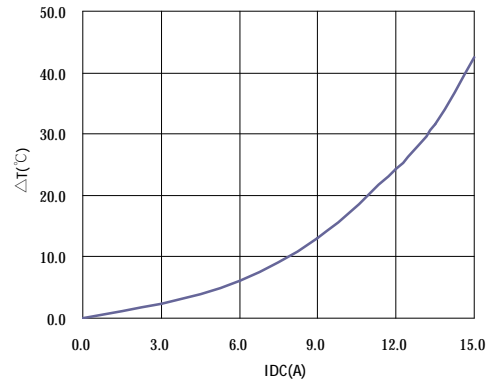
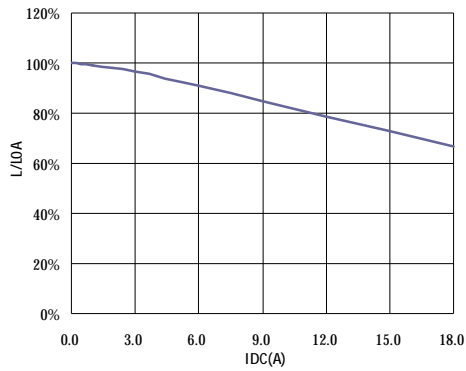
SPECIFICATION FOR APPROVAL

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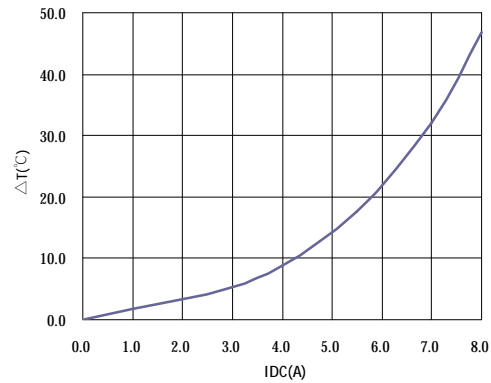
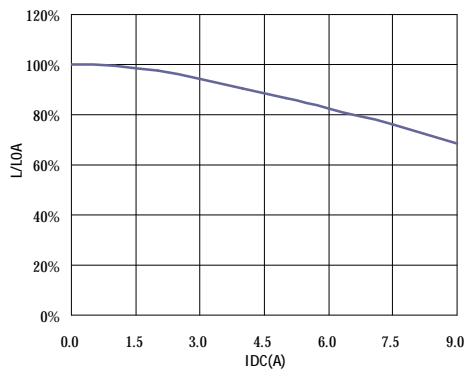
| | | | | | |
|------------|-----------------------------|---------------|------------------|------|---|
| PROD. NAME | Shielded SMD Power Inductor | ABC'S DWG NO. | HE0530□□□□S□-□□□ | | |
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V . Curve :

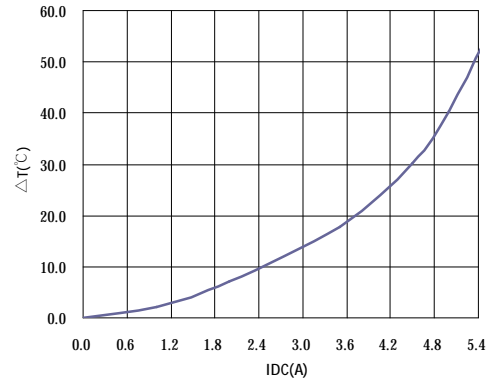
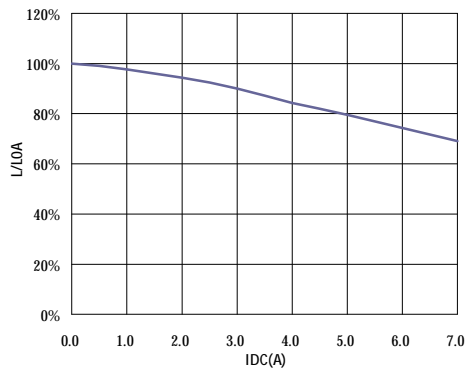
HE0530R47MS□



HE05302R2MS□



HE05304R7MS□



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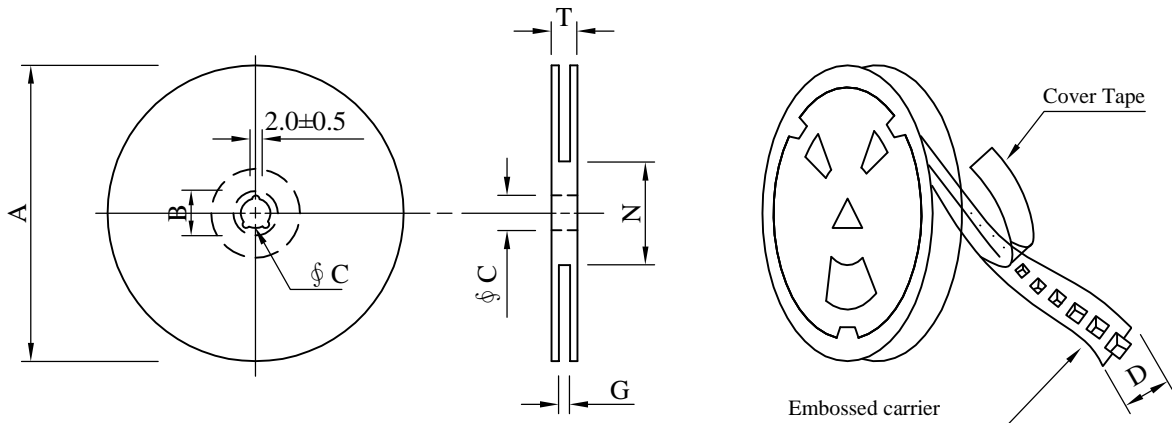
SPECIFICATION FOR APPROVAL

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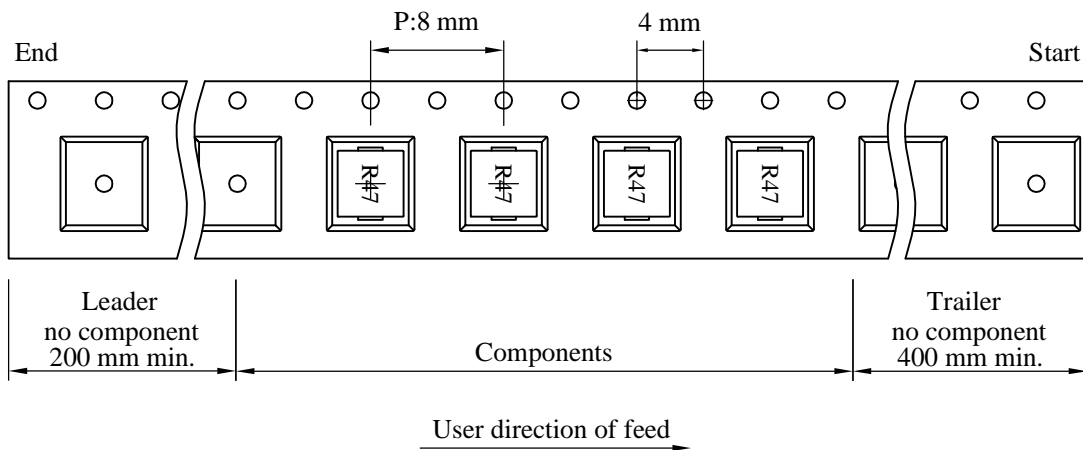
| | | | | | |
|------------|-----------------------------|---------------|------------------|------|---|
| PROD. NAME | Shielded SMD Power Inductor | ABC'S DWG NO. | HE0530□□□□S□-□□□ | | |
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VI . Packaging information :

(1) Configuration



※Carrier tape width : D



(2) Dimensions

Unit:mm

| Style | A | B | C | D | G | N | T |
|---------|-----|--------|--------|----|------------------|------------------|------|
| 13 - 12 | 330 | 21±0.8 | 13±0.5 | 12 | 14 ⁺⁰ | 50 ⁻⁰ | 18.4 |

(3) Q'TY & G.W. Per package

| Code | Inner : Reel | | | Outer : Carton | | |
|------|--------------|----------|---------|----------------|-----------|--------------|
| | Q'TY (pcs) | G.W. (g) | Style | Q'TY (pcs) | G.W. (kg) | Size (cm) |
| B | 2,000 | 1,150 | 13 - 12 | 8,000 | 6.00 | 38 x 37 x 22 |

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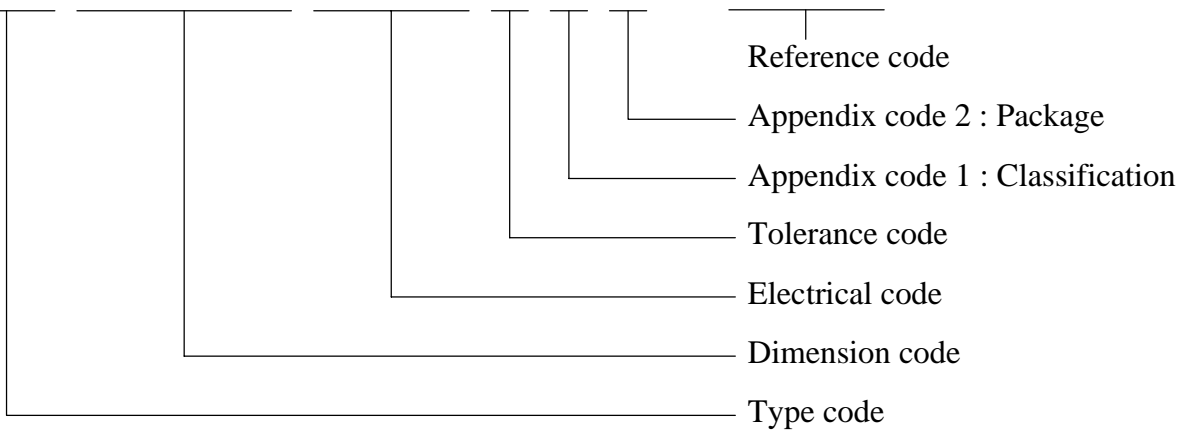
SPECIFICATION FOR APPROVAL

REF. :

| | | | | | |
|------------|-----------------------------|---------------|------------------|------|---|
| PROD. NAME | Shielded SMD Power Inductor | ABC'S DWG NO. | HE0530□□□□S□-□□□ | | |
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VII . Drawing number expression :

H E 0 5 3 0 —



Appendix code 1 : Product Classification

Appendix code 2 : Package Information

| Code | Inner package | Cover tape | Carrier tape | Bag | Package Q'TY | Remark |
|------|--------------------|------------|----------------|----------------|--------------|--------|
| B | T/R (Reel package) | Adhesive | Non-antistatic | Non-antistatic | 2,000 pcs | |

SPECIFICATION FOR APPROVAL

REF. :

| | | | | | |
|------------|-----------------------------|---------------|------------------|------|---|
| PROD. NAME | Shielded SMD Power Inductor | ABC'S DWG NO. | HE0530□□□□S□-□□□ | | |
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VIII . Reliability test :

| Item | Reference documents | Test Condition | Test Specification |
|-------------------------------------|--|---|---|
| 1.High Temperature Exposure | MIL-STD-202 Method 108 | 1.Temperature: 125±2℃ 2.Time:96±2 hours. | 1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%. |
| 2.Temperature Cycling | JESD22-A 104 | 1.Temperature: -40℃ ~ +125℃ 2.Number of cycle:100 cycle 3.Dwell time:30 minutes | 1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%. |
| 3.Biased Humidity Test | MIL-STD-202 Method 103 | 1.Temperature : 85±2 ℃ 2.Humidity: 85% RH. 3.Time:96±2 Hours | 1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%. |
| 4.Operational Life | JESD22-A 108 | 1.Temperature: 125℃ (Temp. rise included) 2.Time:96±2 hours. 3.Rated current | 1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%. |
| 5.External Visual | JESD22-B 101 & MIL-STD-883 Method 2009 | Inspect product constructions, marking and workmanship. | 1.No pollution on the surface of products. 2.Clear marking. 3.No crack. |
| 6.Physical Dimensions | JESD22-B 100 | Verify physical dimensions to the applicable product detail specification. | Per product specification standard |
| 7.Resistance to solvents | MIL-STD-202 Method 215 | Immerse into solvent for 3±0.5 minutes & brush 10 times for 3 cycles. | 1.No body change in appearance. 2.No marking blurred. 3.Inductance shall not change more than ±20%. |
| 8.Vibration Test | MIL-STD-202 Method 204 | 1.Frequency and Amplitud : 10-2000-10 Hz, 1.5 mm. 2.Direction:X, Y, Z 3.Test duration:2 hours for each direction, 6 hours in total. | 1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%. |
| 9.Resistance To Soldering Heat Test | MIL-STD-202 Method 210 & J-STD020D.1 | 1.Highest temperature : 250±5℃. 2.Time (temp. ≥ 217℃) : 60~150 Seconds. 3.IR reflow times : 3 times. | 1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%. |
| 10.Saturation Current | JIS C 6436 & User SPEC. | 1.Applied rated current for 5 seconds. 2.Saturation current | Inductance shall not drop more than 30% typ. |
| 11.Over load | JIS C 6436 & User SPEC. | 1.Applied one and half rated current for a period of 5 minutes. 2.Rated current | No electrical or mechanical damage |
| 12.Temperature Rise Current | JIS C 6436 & User SPEC. | 1.Applied rated current for 10 minutes. 2.Temperature measure by digital surface thermometer. 3.Irms current | Surface temperature rise is less than 40℃ typ. |
| 13.Solderability Test | J-STD-002 & JESD22-B 102 | 1.Baking in pre-testing : 150±5℃ / 16Hours±30 min. 2.Peak temperature : 240±5℃ 3.Time (temp. ≥ 217℃) : 60~150 seconds. 4.IR reflow times : 1 time. | More than 95% soldering coverage min on terminations. |
| 14.Electrical Characteriazation | MIL-STD-202 Method 304 & User SPEC. | 1.Operating temperature : -55℃~125℃ 2.Room temperature : 25℃. | 1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%. |
| 15.Drop | CNS-C6354 & GB/T 2423.8 | 1.Products shall be mounted on SPEC. PCB and dropped down from a height of 1m 2.Drop total time : 6 times (Every side of sample drop 2 times) | 1. Adhesion on PCB shall be enough. 2. Product appearance shall not break. 3. No electrical damage. |
| 16.Terminal Strength Test | IEC 60068-2-21 | 1.Apply push force to samples mounted on PCB. 2.Force of 1.8 kg for 60±1 seconds. | After test, inductors shall be no mechanical damage. |

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